

Chapter 4, lesson 47, Base texture

In this chapter we will start to do some more texture work on the base of the building. More precisely we will work on UV-mapping.

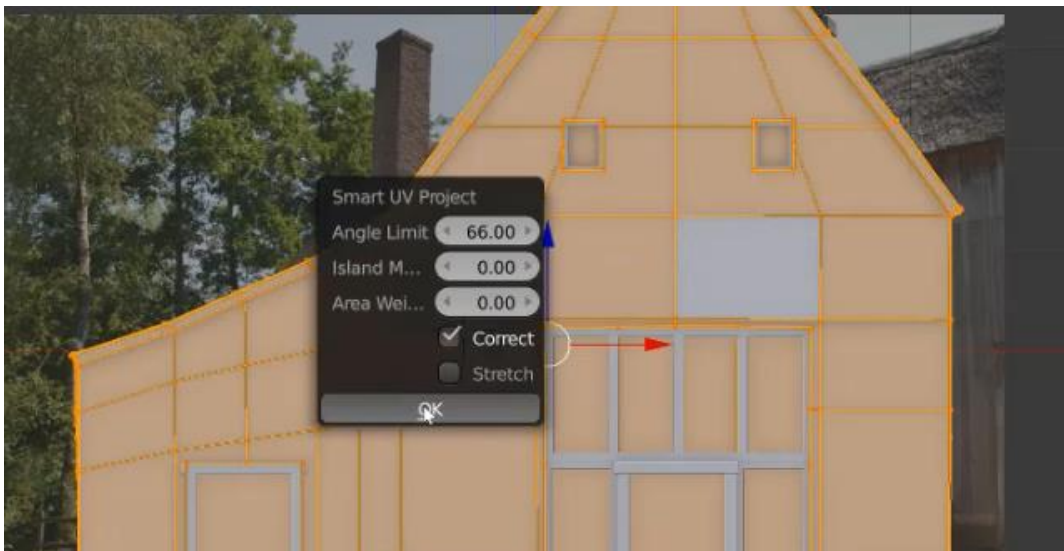
- We will see how the “project from view” alternative can help us to UV-unwrap the base
- We will UV-unwrap most parts of the building base.
- We will clean up some topology.
- Why can’t we use “Smart UV Project” on the base?

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There are multiple ways to think about UV-unwrapping. For most parts this course focuses on the use of “Smart UV project” and “project from view”.

To UV-unwrap the base we will utilize the “Project from view” alternative. The reason for this is that we have a lot of details in this building that will be rotated in ways we don’t desire if we use “Smart UV project”. We will start the lesson by demonstrating this.

We select the building, go into edit mode and press “U” for our UV mapping menu. We select “Smart UV project” make sure “correct” is selected and “Stretched” is deselected. Hit ok to get a mapping in our UV/Image editor.

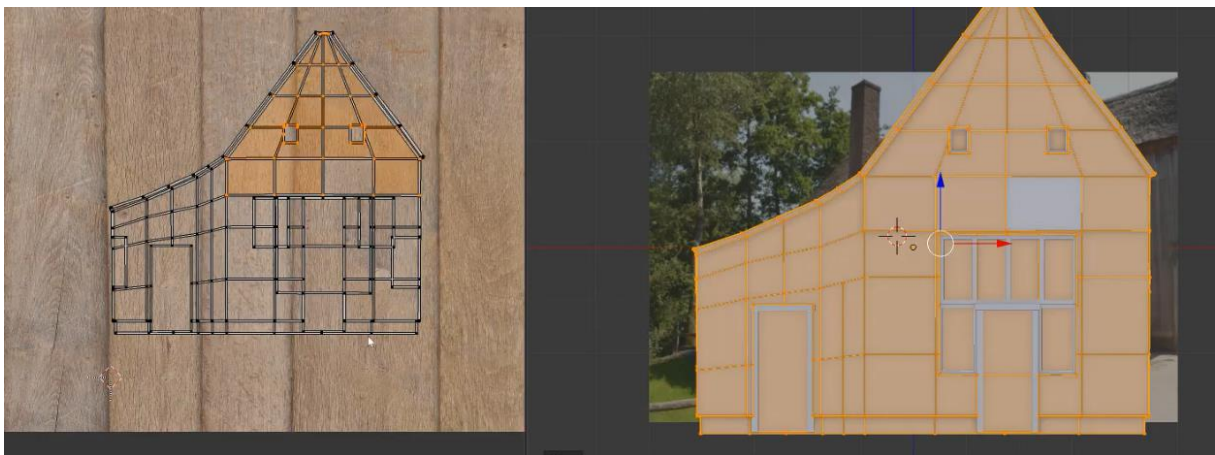


This generally turn out as a pretty good UV-map, but the problem is that these UV-coordinates gets rotated in order to have the UV-map cover as much as possible within the 0 to 1 space. The 0 to 1 space in a UV-map is the area that a square texture covers. Anything outside it is outside the 0 to 1 space of the UV-map. Think of the UV-map as a coordinate system where 0,0 is at the bottom left corner. The Y axis goes upwards, and the X axis goes along the horizon. In the top right corner, we have the 1,1 location and every spot on the image has a value between 0 and 1 for X and Y.

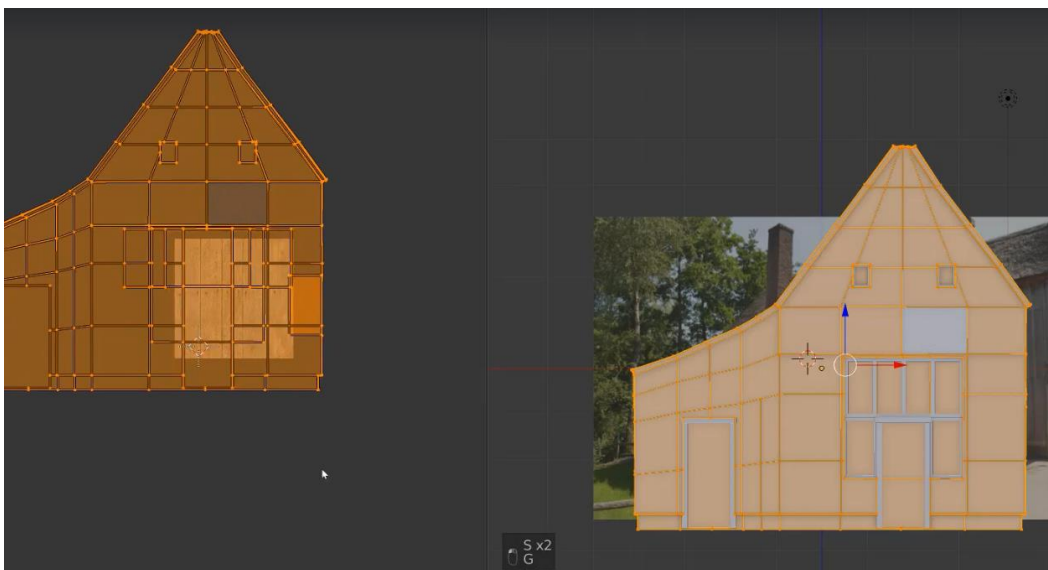
Now in a lot of cases this kind of UV-map is what we want. For instance, if we were to export this to a game engine we would have to have our buildings UV-coordinates fit within this space. How we can achieve this will be discussed further in another lesson but for now we want to be able to scale our UV-map outside the image texture area of 0 to 1 in order to tile our texture on the mesh.

Now let's add a material and an image texture to our building. Go to the material tab in the preference panel. Hit new to add a material. Click on the dot next to the color picker and chose image texture. Click open and browse to the planks_5.png texture included with the course.

The method that we will use to project the UV-map is "project from view". Let's do that right now with the whole building selected. Go to front view. Press "U" and choose "project from view" and you will see a 2D representation of the building in the 2D view.



The downside of this method is that the sides will be projected as a thin line and this is not usable. But the front will work well. Scale up the UV-map so that the texture tiles well.



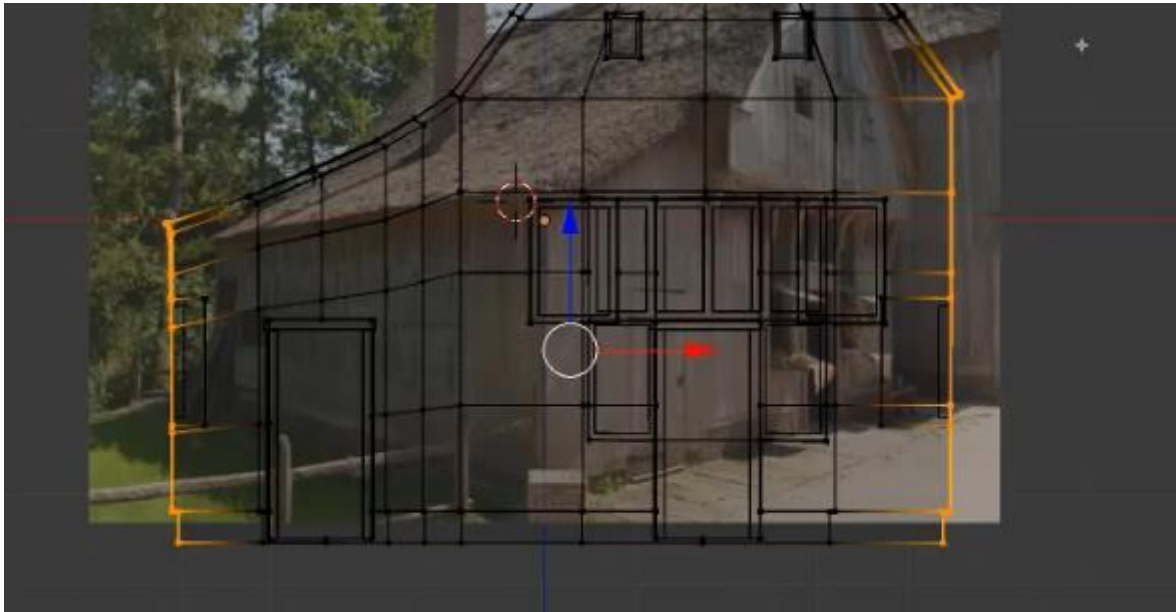
In the 3D view we can see that the UV-map needs to be scaled up even more to make the plank texture look smaller. You can also see the stretched result of the sides and roof.



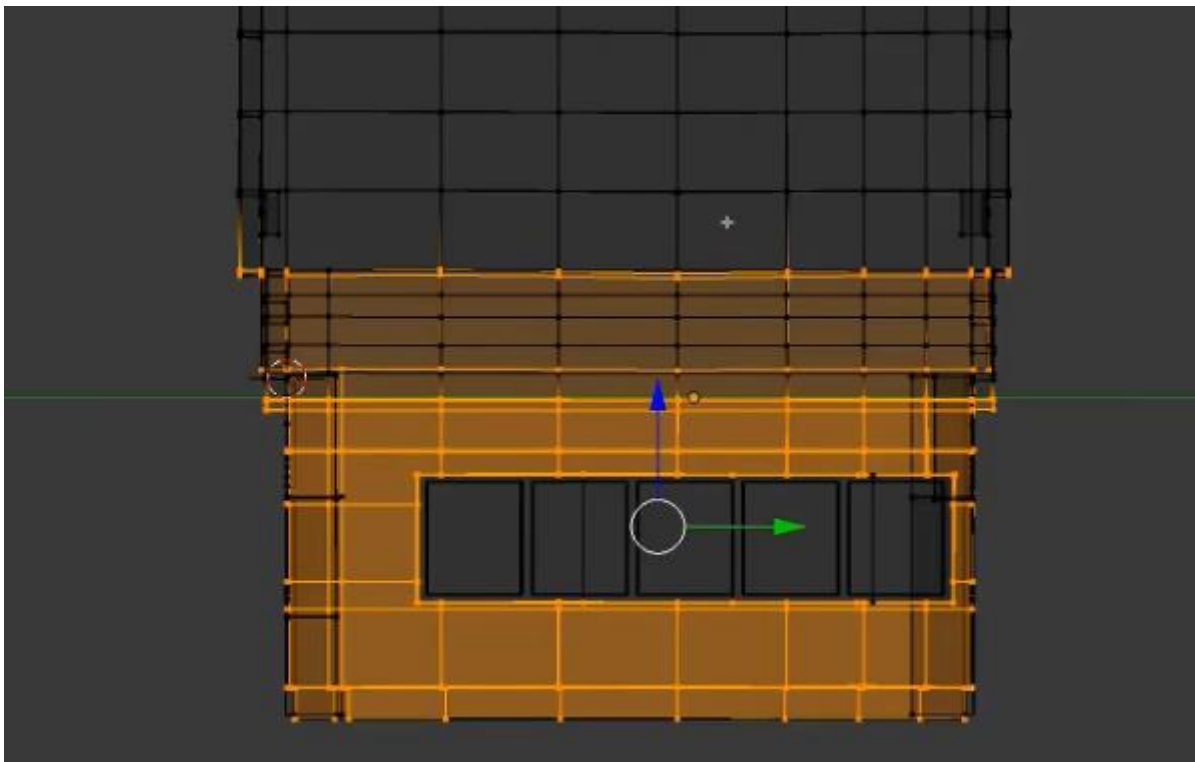
Scale the UV-map until it looks good.



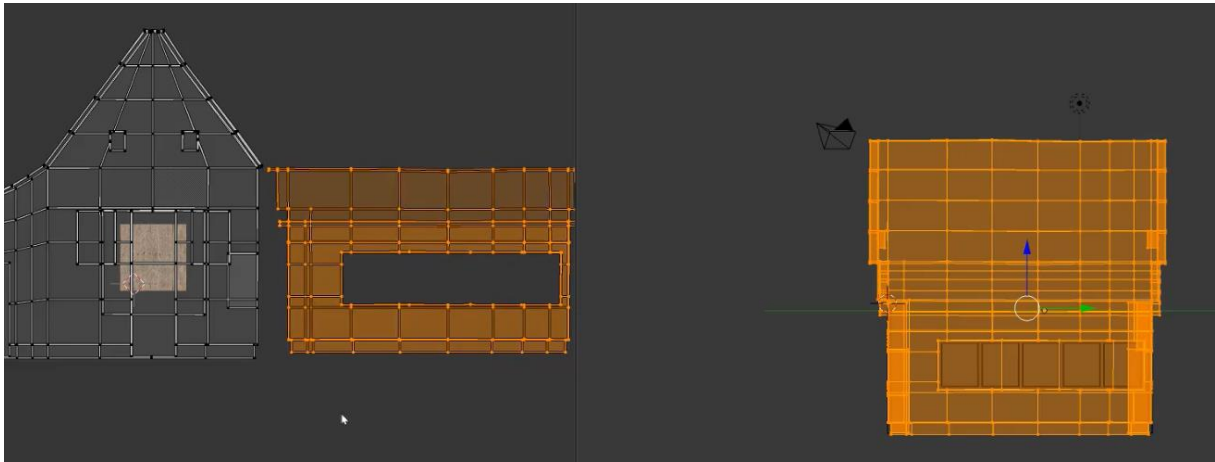
To fix the side walls we will now select those. You can see in your UV-editor that it looks like you have selected two lines. We will not project these differently.



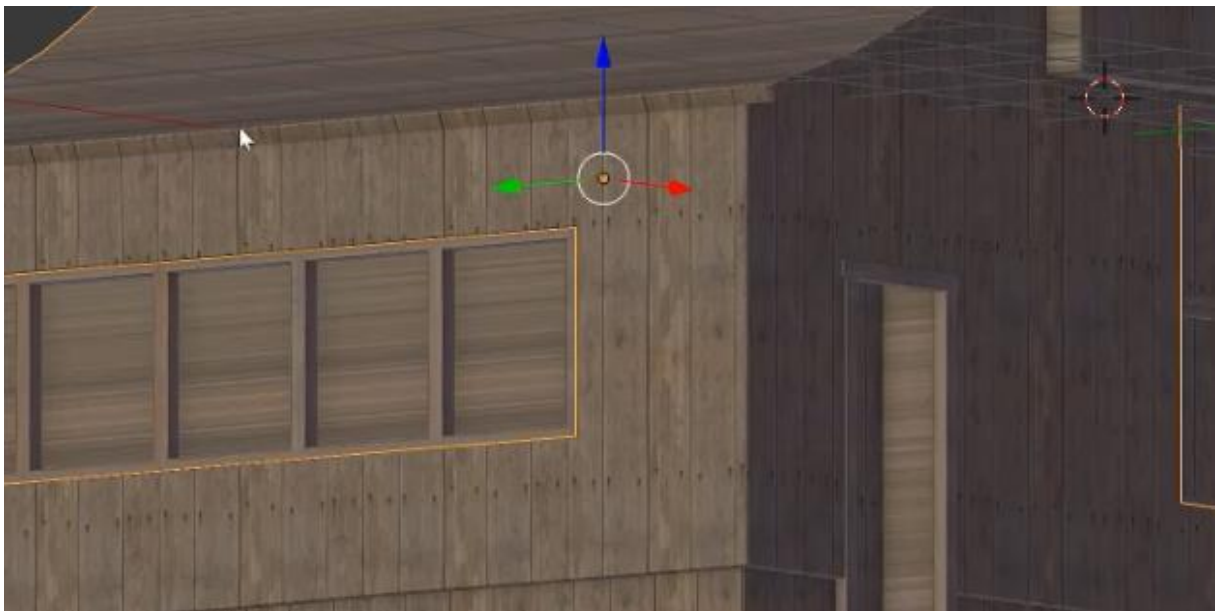
Now go to the side view and use “project from view” If you happen to get perspective in your UV-map make sure that you are in orthographic view by hitting “**numpad 5**”.



Now in the UV-editor scale the side up a bit and move it to the side. Then select everything so that you can compare the size to the front of the building. Align the size with the front.



Your result should look something like this.



The areas that has stretched UV-coordinates can help us indicate what areas we still need to fix. For instance, we can see that the extruded area of the second floor has a face that we need to correct.

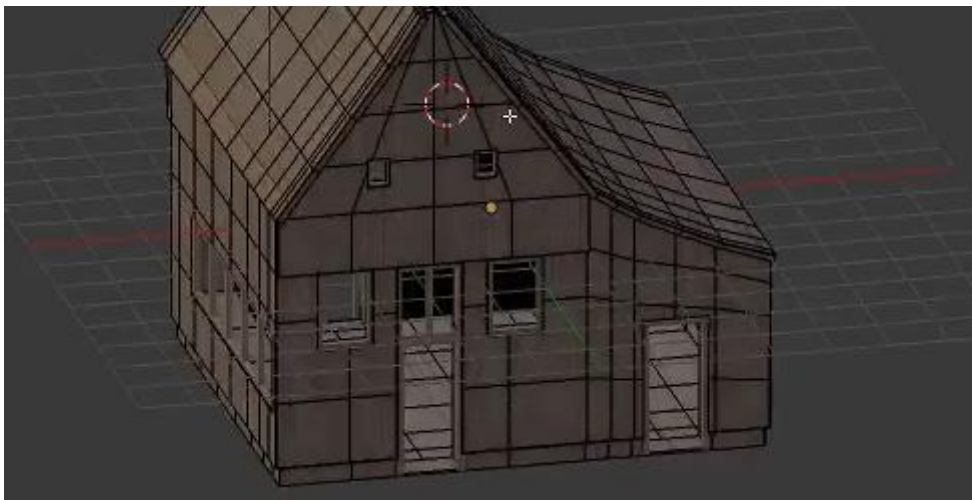


Go around your building and select areas that are facing the same direction as this face. For instance, we will have a similar situation on the other side. Same goes for some of the faces inside the holes that we have.



When they are selected go to the side view so that you can see the full areas of the faces in wireframe mode. Hit “U” and use “project from view”. Scale the adjusted faces to an appropriate size in the UV-editor.

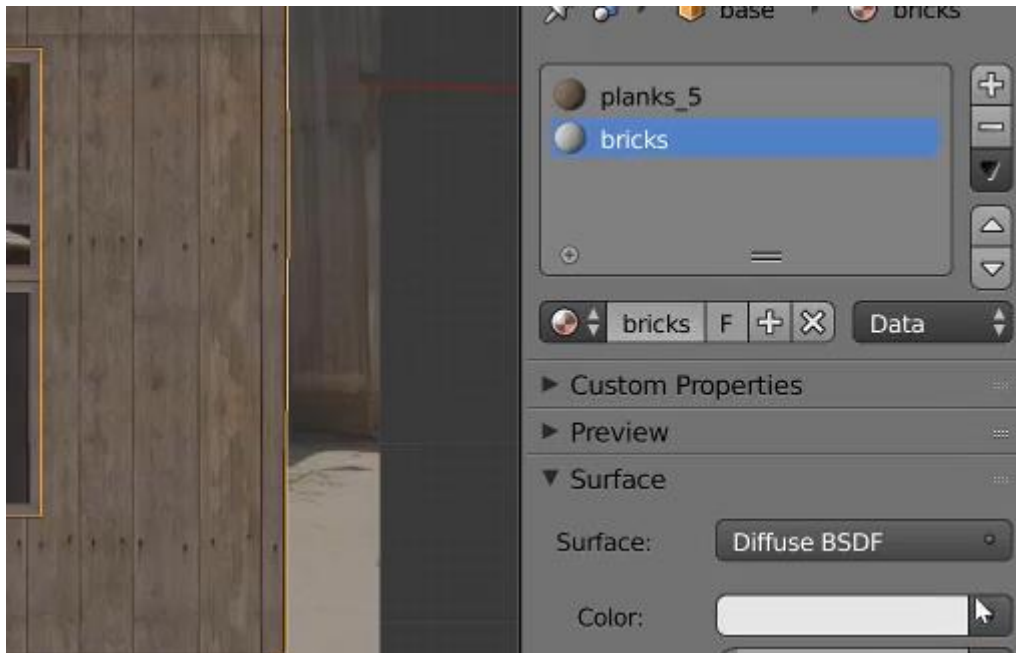
Next, we will delete a few faces that we don’t need. These faces are the bottom faces of the holes in our building. It is good to remove faces like this because they will never be seen in our final model. Also, if our goal is to export this to a game engine these faces won’t take up texture space.



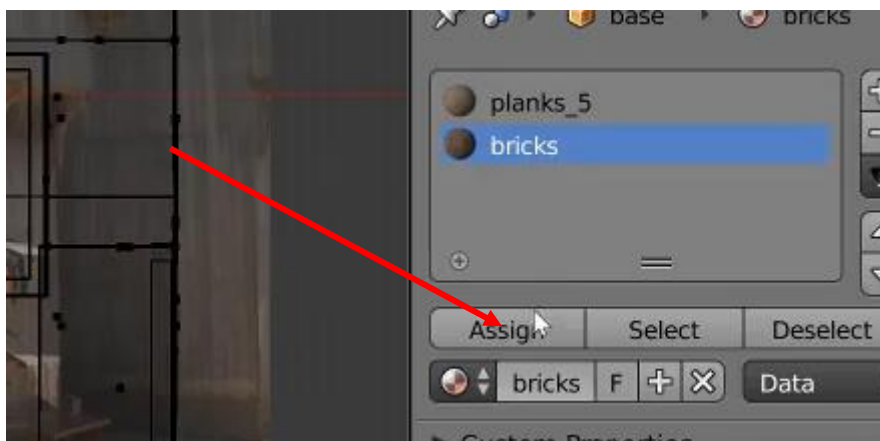
For now, we focus on the faces that is using the current texture that we are working on and we will not bother with the roof and some other areas. Scroll around your building to find any faces that is going to have the wood texture and UV-unwrap the faces you find using the method we have worked with so far.

When we are done with the wood texture we will continue to add another texture on the base of the building. This time we will work with a brick texture. Start by adding a new material in the material

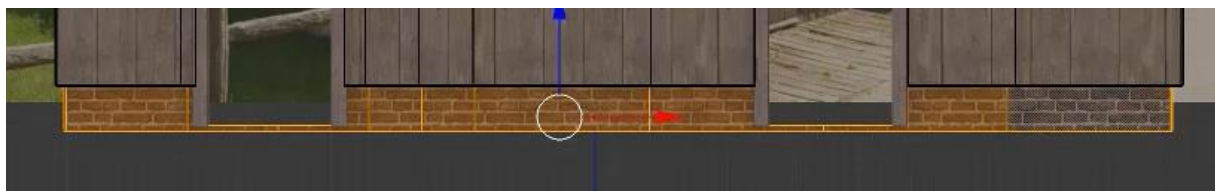
section of the properties panel. Name it “Bricks” and if you forgot to name the wood material also name that one “planks_5” so that we know what wood texture we used. Like before, click the dot next to the color value and select “image texture” click open and we will browse to the “brick_1.png” texture that came with the course.



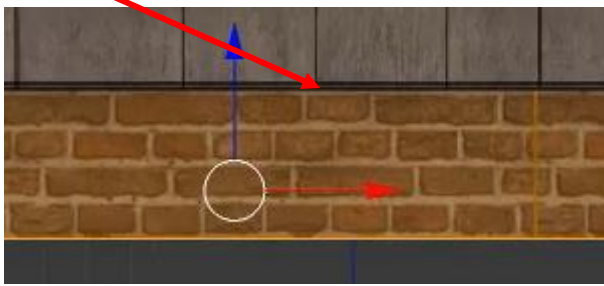
Now select the bottom of the building. We already have the UV-map so select the material “bricks” and hit “assign”



Go to texture mode and adjust the size of the UV-map to fit the scale of the building.



Make sure that your first row of bricks ends up right under the wood planks so that you are not left with a row full of half bricks. It should look something like this.



The sides will be automatically done for us as well since these are already UV unwrapped as well. This is the end of this chapter.